

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-13. (canceled)

14. (new) An information recording apparatus comprising:
a recording device for recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

a calculating device for preparing correlation information which represents a correlation between the set value and reproduction quality, and for obtaining a reference set value which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

a measuring device for measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

an adjusting device for obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured by said measuring device is

different from the target reproduction quality, and for adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value.

15. (new) The information recording apparatus according to claim 14, wherein said adjusting device adjusts the reference set value, by a predetermined adjustment amount, in stages.

16. (new) The information recording apparatus according to claim 15, wherein size of the predetermined adjustment amount is variable.

17. (new) The information recording apparatus according to claim 14, wherein said adjusting device does not adjust the reference set value if the adjustment amount of the reference set value is equal to or less than a predetermined amount.

18. (new) The information recording apparatus according to claim 14, wherein the reproduction quality is reproduction quality including at least one of an asymmetry value, a jitter value and a reproduction error rate.

19. (new) The information recording apparatus according to claim 14, wherein said measuring device measures the reproduction

quality of the record information recorded by said recording device immediately before measurement.

20. (new) The information recording apparatus according to claim 14, further comprising a controlling device for controlling said recording device to record at least one of the correlation information obtained by said calculating device and information as for the reference set value, onto the information recording medium.

21. (new) The information recording apparatus according to claim 14, wherein the information amount has such a size that an ECC block is a reference unit.

22. (new) The information recording apparatus according to claim 14, wherein the information amount has a size based on a time length in which the record information is recorded.

23. (new) An information recording method comprising:

a recording process of recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

a calculating process of preparing correlation information which represents a correlation between the set value and

reproduction quality, and of obtaining a reference set value which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

a measuring process of measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

an adjusting process of obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured in said measuring process is different from the target reproduction quality, and of adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value.

24. (new) An information recording / reproducing apparatus comprising:

an information recording apparatus comprising:

a recording device for recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

a calculating device for preparing correlation information which represents a correlation between the set value and reproduction quality, and for obtaining a reference set value

which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

a measuring device for measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

an adjusting device for obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured by said measuring device is different from the target reproduction quality, and for adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value; and

a reproducing device for reproducing the recorded information from said information recording medium.

25. (new) An information recording / reproducing method comprising:

an information recording method comprising:

a recording process of recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

a calculating process of preparing correlation information

which represents a correlation between the set value and reproduction quality, and of obtaining a reference set value which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

a measuring process of measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

an adjusting process of obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured in said measuring process is different from the target reproduction quality, and of adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value; and

a reproducing process of reproducing the recorded information from said information recording medium.

26. (new) A computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided for an information recording apparatus, said computer program product making the computer function as at least one portion of a recording device, a

calculating detecting device, a measuring device and an adjusting device,

said information recording apparatus comprising:

said recording device for recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

said calculating device for preparing correlation information which represents a correlation between the set value and reproduction quality, and for obtaining a reference set value which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

said measuring device for measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

said adjusting device for obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured by said measuring device is different from the target reproduction quality, and for adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value.

27. (new) A computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided for an information recording / reproducing apparatus, said computer program making the computer function as at least one portion of a recording device, a calculating detecting device, a measuring device, an adjusting device and a reproducing device,

said information recording / reproducing apparatus comprising:

an information recording apparatus comprising:

said recording device for recording record information onto an information recording medium by irradiating the information recording medium with laser light with a recording power according to a set value;

said calculating device for preparing correlation information which represents a correlation between the set value and reproduction quality, and for obtaining a reference set value which gives target reproduction quality as being desired reproduction quality, by reproducing test-record information recorded with changing the set value;

said measuring device for measuring the reproduction quality, by reproducing the record information recorded by using the reference set value, at least in each information amount in which the reproduction quality can be measured; and

said adjusting device for obtaining adjustment amount of the reference set value on the basis of the correlation information if the reproduction quality measured by said measuring device is different from the target reproduction quality, and for adjusting the reference set value such that a set value which is adjusted based on the adjustment amount is to be a new reference set value; and

said reproducing device for reproducing the recorded information from said information recording medium.